CALIFORNIA ENERGY COMMISSION
1516 NINTH STREET
SACRAMENTO, CA 95814-5512

April 4, 2002

Michael Hatfield
Calpine Corporation
4160 Dublin Blvd.
Dublin, CA 94568-3139

Dear Mr. Hatfield:

INLAND EMPIRE ENERGY CENTER PROJECT (01-AFC-17) DATA REQUESTS #162 to 188

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission (Energy Commission) staff requests that the Calpine supply the information specified in the enclosed data requests.

The subject areas addressed in the attached data requests are biological resources, cultural resources, land use, socioeconomics, and visual resources. To avoid confusion when referencing data requests and responses, the enclosed data requests are numbered as a continuation of the data requests submitted January 14, 2002, and begin with Data Request 162. The information requested is necessary to: 1) understand the project, 2) assess whether the project will result in significant environmental effects, and 3) assess project alternatives and mitigation measures.

Written responses to the enclosed data requests are due to the Energy Commission by May 6, 2002 or at such later date as may be agreed upon by the Energy Commission staff and the applicant.

If you are unable to provide the information requested in the data requests or object to providing it, you must contact the committee assigned to the project, and the project manager, within ten days of receiving these requests stating your reason for delay or objections.

If you have any questions regarding the enclosed data requests, please call me at (916) 651-8839 or Bob Eller at (916) 651-8835.

Sincerely,

Jim Bartridge
Siting Project Manager

Enclosure
cc: Docket (01-AFC-17)
Proof of Service 01-AFC-17

Technical Area: Biological Resources
Authors: Natasha Nelson and Shari Koslowsky

BACKGROUND

The applicant has provided information about the biologist, permit number and methodology in the February 13th data response to Data Request 34. To date, the applicant has not provided the wet-season survey results. Staff is presently unable to estimate the delivery date of this information.

DATA REQUEST

162. Please provide an estimate of when the wet-season survey results will be available.

163. Please provide a copy of the wet season survey results within ten business days after completion of the final survey.

BACKGROUND

The applicant did not provide information in the February 13 data response of sufficient resolution to accurately estimate impacts to wetlands to one-tenth of an acre. The applicant has verbally indicated to staff that they are revising the map provided in the data response and will more carefully assess the spatial relationship between the project footprint and seasonal wetlands. The applicant has also verbally indicated to staff that it will seek a U.S. Army Corps of Engineers (USACE) permit because it is unlikely that project features can avoid all wetlands or waters of the U.S. as was stated in the February 13th data response. Staff also believes that the applicant will also need to apply to the California Department of Fish and Game (CDFG), under §1601, for disturbance within jurisdictional waters.

DATA REQUEST

164. Please provide staff with the USACE and CDFG permit application and supporting documents, as well as a the proposed schedule for agency review.

165. Please provide a description of construction measures and placement of structures that demonstrate avoidance of wetlands and defined bed and bank features consistent with the findings of the USACE field report and Figure B-2 (see Data Response 40-Submittal No. 2, February 20, 2002).

166. Provide a map of wetlands or other jurisdictional features in greater detail than that provided in the AFC that is compatible with the quantification of wetlands to one-tenth of an acre presented in the text.

167. Please submit a revised map and accompanying assessment that more accurately describes the space that will be occupied by the project footprint in relation to seasonal wetlands.

168. Please update Table 37-1 from Data Response 37, submitted on February 13, 2002, that replaced AFC Table 5.3-7, to reflect potential impacts to wetlands and waters of the U.S. in the proposed USACE permit application. Also, please include in the revision to Table 37-1, the gas line route and the electrical connection for the compressor station.

BACKGROUND

The applicant has indicated which projects are considered in the cumulative air quality analysis in its February 13th data response. The cumulative nitrogen deposition on Class I wilderness areas was provided in Table 40-1 of the applicant's February 20th response.

DATA REQUEST

169. Please provide the nitrogen deposition ISCST3 modeling files for the cumulative impacts determination (see Data Response 40-Submittal No. 2, February 20, 2002).

BACKGROUND

The applicant has provided a partial response to Data Request 41 regarding the location of the compressor station and an estimated response regarding the electrical connection for the station. Information regarding the location of the electrical connection features and the mitigation being taken to protect biological resources is still needed for staff analysis. Southern California Edison (SCE) is currently considering either a 33kV or 4160V interconnection to the compressor station. In addition, staff understands that this connection may be placed underground.

DATA REQUEST

170. The applicant should describe how the compressor station will be connected to the electrical grid and whether this connection would require additional distribution lines or poles. If distribution lines are needed, describe impacts to wildlife and protections against electrocution that will be installed.

171. Please provide an estimated schedule for SCE's determination of the proposed size and configuration of the interconnection to the compressor station. The schedule should include the date on which the applicant will submit to staff the results of SCE's determination for the design and construction of the compressor station's electrical connection.

BACKGROUND

The applicant has responded to Data Request 42; however, in light of the applicant's most recent indication that not all seasonal wetlands will be avoided and pending the results of the wet season surveys for the vernal pool fairy shrimp, additional mitigation measures should be described.

Data Request

172. Please provide a detailed outline of the biological resources mitigation measures that will be proposed by the applicant for impacts to seasonal wetlands and, depending on the results of the wet season survey, potential vernal pool fairy shrimp habitat. These measures should be incorporated into the draft Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP).

Technical Area: Cultural Resources
Author: Gary Reinoehl and Roger Mason

BACKGROUND

The response to Data Request 44 indicates that three properties have been evaluated as potentially eligible for the California Register of Historical Resources (CRHR):

- 25626 Antelope Road
- 28050 Matthews Road
- 28380 Matthews Road

In order for staff to complete their analysis of impacts to these potentially eligible properties, staff needs to know how important the setting is to the eligibility of the properties. This was previously requested in Data Request 44:

> ". . .please have the architectural historian evaluate whether the integrity of setting will be significantly impacted by construction of the energy center such that the significance of the resource will be materially impaired."

In addition, if impacts will be significant, staff requests a discussion of what mitigation measures the applicant would recommend.

DATA REQUEST

173. For each of the three potentially eligible properties listed above, please discuss whether construction of the energy center would materially alter the surroundings (setting) to the point that the property's historical significance would no longer be conveyed and, therefore, the property would no longer be eligible for the CRHR (cf. CEQA Guidelines Section 15064.5(b)(1) and (b)(2)).

174. If impacts to any of the three potentially eligible properties would be significant because the change in setting would make the property no longer eligible, please provide a discussion of the applicant's recommended mitigation measures.

Technical Area: Land Use
Author: Negar Vahidi

BACKGROUND

According to the AFC, under section 1.5 (Facility Location and Description), the "…Energy Center will be located on an approximately 46-acre parcel (APN No. 331-180-08)." The parcel is located in Section 14, Township 5 South, Range 3 West, near Romoland in Riverside County. As further stated in the AFC "Approximately 24 fenced acres and 35 acres of permanent disturbance are required to accommodate the Energy Center."

The legal status of the 46-acre parcel for this project is unknown based on the information provided in the AFC. Legal land division parcels are established in accordance to the procedures and the requirements set forth in the State Subdivision Map Act (Government Code section 66410 – 66499.58).

The information provided in the AFC describes an Assessor's parcel. Assessor's parcels are not necessarily legal land division parcels. Assessor's parcels are generated by a County Assessor's Office as a means of placing a value on property or portion thereof for the purpose of property taxation in accordance to the California Revenue and Taxation Code. The County Assessor does not divide or create parcels of land in conducting this process. The assignment of an Assessor's Parcel Number to a property also provides a convenient and quick location reference for the County Assessor to identify a property on the property assessment roll within a County.

DATA REQUEST

175. Please explain whether the applicant has a legal parcel of land on which to build.

a) Explain the land division procedure used to create the present 46-acre parcel. If it consists of multiple legal parcels, please describe each parcel and place them on a site map.

b) Provide a copy of the recorded final map, lot line adjustment map, or Certificate of Compliance for the parcel(s).

c) The power generation facility is to be contained on a 35-acre portion of the 46-acre property. Discuss whether the proposed power plant is to be constructed on a single legal parcel of land and the applicant's intentions regarding the remaining 11-acre portion.

BACKGROUND

According to the AFC, under Section 5.7.1 (Affected Environment), "The proposed Energy Center site and ancillary facilities are located within portions of unincorporated

areas of southwestern Riverside County near the community of Romoland." The proposed project site lies within Planning Area 3 of the County of Riverside's Menifee North Specific Plan (No. 260). The areas to the south and southeast of the proposed project site, particularly along Menifee Road, also lie within the boundaries of the Menifee North Specific Plan and are planned for development with a mixture of land uses including residential, institutional, and commercial.

DATA REQUEST

176. Please provide the timing of the development of the various phases of the Menifee North Specific Plan

177. Please provide the status of the tentative subdivision map(s) for the developments that are planned to occur south and southeast of the proposed IEEC project site.

BACKGROUND

The State of California Department of Education (CDE) is responsible for approving the placement of all new school sites, and approval of any construction projects both on existing school sites and new school sites. CDE approval is necessary for school districts to receive funds from the State to either purchase school sites or build school facilities. The California Code of Regulations, Title 5, Form 4.01 provides health and safety criteria, which school districts are required to follow for school site selection. These criteria are also contained in the CDE School Site Selection and Approval Guide, which has been docketed.

The Romoland School District is evaluating five sites for a new school planned for development within the project area. Given that the proposed project site (i.e., a site for an industrial use) is in close proximity to these proposed school sites, some of the proposed school sites may be precluded from development due to the CDE's Environmental School Site Selection Screening Criteria.

DATA REQUEST

178. Please provide an accurate, to-scale map of the project site and both existing and proposed (differentiated) linear facilities with respect to the Romoland School District's proposed schools. In addition, the map should provide buffer lines drawn (in shaded format) around the proposed project site and linears based on the following CDE Environmental School Site Selection Screening Criteria items:

a) **High Voltage Power Transmission Lines:** [Cal. Code Regs., tit. 5, § 14010; p.6 of the CDE Site Selection and Approval Guide, 2000]

1) Within 100 feet from the edge of an easement for a 50-133 kv line, if any.
2) Within 150 feet from the edge of an easement for a 220-230 kv line, if any.
3) Within 350 feet from the edge of an easement for a 500-550 kv line, if any.

b) **Railroads:** [Cal. Code Regs., tit. 5, § 14010; p.10 of the CDE Site Selection and Approval Guide, 2000]

1) Within 1,500 feet of a railroad track easement, if any. If yes to item 4b., label whether the track is a main line or spur; and label any high-pressure gas lines near the tracks that could rupture in the event of a derailment.

c) **Hazardous Disposal Sites:** [Ed. Code, § 17213(a)(1)-(3); Health & Saf. Code, § 25220; p.7 of the CDE Site Selection and Approval Guide, 2000]

1) Within 1,500 feet of an easement of an above ground or underground pipeline which carries hazardous substances, materials, or waste (natural gas supply to school or neighborhood excluded) that can pose a safety hazard by a Risk Analysis Study.

d) **High-Pressure Water Pipelines, Reservoirs, Water Storage Tanks:** [p.11 of the CDE Site Selection and Approval Guide, 2000]

1) Within 1,500 feet of the easement of an above-ground or underground water pipeline, reservoir or water storage tank.

Technical Area: Socioeconomics
Author: **Sue Walker**

BACKGROUND

Page 5.8-4 of the AFC notes that the Romoland School District had a total student enrollment of 1,411 students during the 2000-2001 school year. The AFC additionally notes that the Perris Union High School District had an estimated enrollment of 6,000 students during the 2000-2001 school year. However, the AFC does not indicate either the existing capacity of these schools, or any projections for future enrollment, capacity or expansion. The following information is needed to determine whether the proposed project has the potential to adversely impact the capacity of local schools.

DATA REQUEST

179. Please provide the existing student capacities of the two schools that make up the Romoland School District and the six schools that make up the Perris Union High School District. Additionally please provide any known plans for new schools or expansions that either District may be considering, as well as any enrollment projections that either Districts may have developed.

Technical Area: Visual Resources - Plume
Author: William Walters

BACKGROUND

The Applicant has provided cooling tower exhaust and plume modeling information in Visual Attachment 1 to the first round of Data Responses, which was provided to answer Data Request 158. However, the information provided in Visual Attachment 1 did not include all of the information requested in Data Request 158. Staff requires additional cooling tower design and exhaust data to perform the visual plume modeling analyses.

DATA REQUEST

180. Visual Attachment 1 did not include all requested design data for the cooling tower. Please provide the design liquid-to-gas (L/G) mass flow ratio for the tower.

181. Visual Attachment 1 did not include all requested exhaust data for the cooling tower. Only one case was provided and it did not reference the ambient conditions (temperature and relative humidity) for that case or identify whether duct firing was on or off for that case. In order to complete a plume modeling analysis staff requires, at a minimum, the exhaust conditions for one duct firing case and one non-duct firing case with referenced ambient conditions. Please provide cooling tower exhaust conditions, with the same parameters as provided in Visual Attachment 1, for one duct firing case and one non-duct firing case with the referenced corresponding ambient conditions (temperature and relative humidity). Please also provide the heat rejection rate (in MMBtu/hr or MW) for each case provided.

BACKGROUND

The Applicant has provided HRSG exhaust and plume modeling information in Visual Attachment 1 to the first round of Data Responses, which was provided to answer Data Request 160. However, the information provided in Visual Attachment 1 did not include all of the information requested in Data Request 160; there is conflicting information presented; and staff has concerns regarding some of the information presented. The Applicant has identified that this project will have very low exhaust temperatures (135.8°F/331°K when duct firing and 162.8°F/346°K without duct firing). The East Altamont project, also proposed by Calpine, originally proposed similarly low exhausts temperatures that were later revised (the original minimum exhaust temperature of 135°F was revised to a minimum exhaust temperature of 155°F) to address condensation concerns during cold weather. Based on the rationale for the East Altamont HRSG exhaust temperature revision, staff is concerned that the HRSG exhaust temperatures currently provided by the Applicant for the IEEC HRSGs may be

lower than what is reasonable. Additionally, the plume modeling files provided by the Applicant used a non-duct firing temperature of 190°F/361.1°K, which is substantially higher than the 162.8°F/346°K provided in Visual Attachment 1. Staff needs confirmation that the exhaust temperatures assumed for this project are correct and reasonable; and to complete its plume modeling analysis staff needs the ambient conditions assumed for the two cases provided in Visual Attachment 1.

DATA REQUEST

182. Please explain why the HRSG exhaust temperature when duct firing provided in Visual Attachment 1 (i.e. 135.8°F) is reasonable and whether this temperature will create internal condensation during cold weather.

183. Please clarify the non-duct firing exhaust temperature. Is it 162.8°F as identified in Visual Attachment 1 or 190°F as provided in the plume modeling files.

184. Please provide the ambient conditions (temperature and relative humidity) that correspond to the two HRSG exhaust operating cases provided in Visual Attachment 1.

BACKGROUND

The Applicant provided plume modeling input and output files and provided some explanation of the plume modeling methodology in Visual Attachment 1. However, staff has additional questions in regards to the modeling techniques and assumptions.

DATA REQUEST

185. Visual Attachment 1 indicated that the SCAQMD 1981 Riverside meteorological file was used along with relative humidity data from March AFB. However, the mixing height data from the SCAQMD meteorological file was replaced with a constant mixing height of 600 meters. Please explain why the SCAQMD meteorological file's mixing height data was modified.

186. The cooling tower plume modeling input file models a single exhaust condition for a single cell of the cooling tower. Please describe how the modeling output is adjusted to account for the facts that the cooling tower has a total of 16 cells, the cooling tower exhaust conditions vary as a function of the operating condition (i.e. duct firing or no duct firing), and they vary as a function of ambient temperature and relative humidity.

187. The HRSG plume modeling input file models a single exhaust condition for duct firing and a single exhaust condition for non-duct firing. Please describe how the modeling output is adjusted to account for the fact that the HRSG exhaust moisture content varies as a function of the ambient temperature and relative humidity.

188. The Applicant's modeling results often indicate that the plume width is greater in dimension than the plume length for both the cooling tower and the HRSG. However, during other hours there is no corresponding plume width while there are positive values for plume height and plume length. Staff does not consider these to be reasonable modeling results. Please describe how the model can find that the visible HRSG plumes are wider than they are long under rural dispersion conditions, and how the model can find plume height and length with no corresponding width.